

Amendments to the Claims:

This listing of claims replaces all prior listings:

1. (Currently amended) An apparatus comprising:
a Universal Serial Bus (USB) device to connect to a USB host, the USB device comprising:
a PAD signal line connectable to an external signal line that couples to the USB host;
a keeper stage comprising at least one controllable weak pull-up device and at least one controllable weak pull-down device, the keeper stage to hold the PAD signal line in a weakly held state responsive to changes in [[the]] a state of the external signal line that occur after a powering down, in which [[the]] control of the at least one controllable weak pull-up device comprises a logical NAND of a SLEEP signal and a PAD signal on the PAD signal line, and [[the]] control of the at least one controllable weak pull-down device comprises a logical NOR of an inverted SLEEP signal and the PAD signal.
2. (Original) The circuit of claim 1 in which the weakly held state is the last in time state of the external signal line.
3. (Cancelled)
4. (Previously Presented) The circuit of claim 1 further comprising circuitry to disable the at least one weak pull-down device if the weak-pull up device is enabled and to disable the at least one weak pull-up device if the weak pull-down device becomes enabled.
5. (Cancelled)

6. (Currently amended) The circuit of claim 1 further comprising a controllable output buffer stage which is able to drive the state of the PAD signal and having circuitry to enable and disable the controllable output buffer stage based upon the state of an ENABLE signal.

7. (Previously Presented) The circuit of claim 1 in which the SLEEP signal which can enable and disable the keeper stage.

8. (Cancelled)

9. (Currently amended) A method comprising:

after powering down a Universal Serial Bus (USB) device, sensing a state of an external signal coupled to a USB host;

storing the state of the external signal in a PAD signal weakly held in a stored state by a keeper stage having at least one controllable weak pull-up device and at least one controllable weak pull-down device, the weakly held PAD signal being responsive to changes in the state of the external signal; and

controlling the weak pull-up device with a logical NAND of the PAD signal and a SLEEP signal, and controlling the at least one weak pull-down device with a logical NOR of [[the]] an inverse of the SLEEP signal and the PAD signal.

10. (Original) The method of claim 9 in which the weakly held state of the PAD signal may be overcome by the external signal.

11. (Cancelled)

12. (Previously Presented) The method of claim 9 further comprising disabling the at least one weak pull-down device when the at least one weak-pull up device is enabled, and

disabling the at least one weak pull-up device when the at least one weak pull-up device is enabled.

13. (Cancelled)

14. (Currently amended) The method of claim 9 further comprising enabling and disabling the keeper stage based upon [[the]] a state of a SLEEP signal.

15. (Original) The method of claim 13 further comprising turning on and turning off the at least one weak pull-up and at least one weak pull-down devices based upon the state of the SLEEP signal.

16. (Original) The method of claim 15 further comprising implementing the controllable weak pull-up device and the controllable weak pull-down device with square devices in an integrated circuit.

17-20. (Cancelled)

21. (Currently amended) The system of claim [[17]] 1 wherein the circuitry keeper stage is implemented in an integrated circuit.

22. (Currently amended) The system of claim [[21]] 1 wherein the controllable weak pull-up device and the controllable weak pull-down device are square devices.

23. (Cancelled)

24. (Cancelled)

25. (Currently amended) The apparatus of claim [[24]] 1 in which the PAD signal line is also driven by an internal circuit keeper stage comprises at least one controllable weak pull-up device and at least one controllable weak pull-down device.

26. (Currently amended) The apparatus of claim [[24]] 25 in which the keeper circuit stage also holds the PAD signal line in a weakly held state that represents the last in time state of the PAD signal line as driven by the internal circuit before powering down of the internal circuit is powered down.

27. (Currently amended) The apparatus of claim [[24]] 25 in which the weakly held state can be overcome by either the internal circuit or the USB host external device.

28. (Previously presented) The circuit of claim 1 in which the USB device comprises a processor that, after powering down, awakens when the PAD signal changes state.

29. (Previously presented) The method of claim 9 further comprising awakening the device when the USB host drives the PAD signal to a different state

30. (Previously presented) A Universal Serial Bus (USB) device having a PAD signal line to connect to a USB host through an external signal line, the USB device comprising:
an output buffer stage to drive the PAD signal line and the external signal line;
a keeper stage to maintain a state of the PAD signal line in a weakly held state; and
a processor;
wherein the USB device operates in at least three states:

(a) when both the output buffer stage and the keeper stage are disabled, the USB device listens to the USB host through the external signal line,

(b) when the output buffer stage is enabled, the USB device drives the external signal line to send a signal to the USB host, and

(c) when the USB device is powered down, the keeper stage is enabled to hold the PAD signal line in a weakly held state responsive to changes in the external signal line, and the processor is awakened when the USB host drives the external signal line to a different state.

31. (Previously presented) The USB device of claim 30 in which the keeper stage comprises at least one controllable weak pull-up device and at least one controllable weak pull-down device.

32. (Previously presented) The USB device of claim 31 in which the control of the at least one controllable weak pull-up device comprises a logical NAND of a SLEEP signal and a PAD signal on the PAD signal line, and the control of the at least one controllable weak pull-down device comprises a logical NOR of an inverted SLEEP signal and the PAD signal.